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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

*D. Lawrence*

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*4.18.03*

~~OK~~ AS ~~ENTERED~~

IN RE APPLICATION OF

LUCIO DE ANGELIS

: EXAMINER: CROSS, LATOYA I

SERIAL NO: 09/581,264

FILED: JUNE 28, 2000

: GROUP ART UNIT: 1743

FOR: PROCESS FOR THE  
DETERMINATION OF MTBE IN  
THE GROUND AND AIR

REQUEST FOR RECONSIDERATION

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

SIR:

Please reconsider the Official Action dated December 17, 2002, in view of the  
following remarks:

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REMARKS

Claims 1-5 are presently active in this case. In the outstanding Office Action, Claims 3 and 4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent No. 5,811,662 to Williams et al. in view of U.S. Patent Number 5,573,728 to Loesch et al.

Applicants acknowledge with appreciation the indication that Claims 1 and 2 are in condition for allowance. Applicants further acknowledge with appreciation the indication that claim 5 would be allowable if rewritten in independent form. However, since applicants believe themselves entitled to the scope of protection stated in claim 3, claim 5 has presently been maintained in dependent format.

Briefly recapitulating, the present invention (Claims 3-5) is directed to a device for determining MTBE vapors. The device includes a series of sensors wherein each sensor comprises a sensitive element produced with a 40 micron layer of semiconductor metal oxide and a heater capable of bringing the temperature of the sensor development to a range of 300 to 500°C. At least one of the sensors is equipped with a membrane permeable to gasses and impermeable to water for the protection of the sensitive element. Claim 4 defines that the semiconductor metal oxide is tin oxide.

In contradistinction thereto, the Williams et al. patent is directed to a sensor consisting of WO<sub>3</sub> for detecting ozone. Nowhere does the Williams et al. patent teach that it is suitable for determining MTBE vapors. In fact, column 4 lines 15-20 of Williams et al. states that the Williams et al. sensors are selective over (i.e., not sensitive to) other gases. This is made clear by Figure 3 of the Williams et al. patent which illustrates that only trace "C" increases as a function of the concentration of ozone, whereas the other traces present resistance values which remain very low at all examined concentrations. It should be noted that all hydrocarbons have a behavior of reducing gases and would tend to take oxygen from the surface of a sensor made of WO<sub>3</sub> while ozone interacts in a different manner.

*intended use*

Moreover, Applicants traverse the assertion that "the slot-containing cap is equivalent to Applicants' membrane." The Williams et al. patent does not teach or suggest a semi-permeable membrane configured to protect the sensor. Nowhere does the Williams et al. patent teach or suggest that the cap 102 permits gasses to pass therethrough yet is impermeable to water. Finally, the Williams et al. patent does not teach a configuration where a series of sensors are utilized.

*would have to be*

The Loesch et al. patent does not address any of the shortcomings of the Williams et al. patent. Furthermore, the Loesch et al. sensor is much more complex than the Applicant's sensor. Loesch et al. teach a selective sensor (for distinguishing methanol from ethanol) .

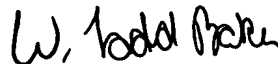
using a very complex structure in which the resistance of a sensor element is measured and such resistance is evaluated by measuring the temperature of the device. That is, the combustion heat due to the examined gas. The measured temperature is confronted with the temperature of a similar sensor which does not react with the gas. Therefore, three elements on two different substrates are used, the first two measure the temperature and the third measures the conductivity. Hence, the Williams et al. patent is not believed to anticipate or render obvious the claimed invention (claims 3-5) when considered alone or in combination with the Loesch et al. patent.

In light of the above discussion, it is respectfully submitted that Claim 3 is patentably distinguishable from the applied patents, the dependent Claims 4 and 5 are also patentably distinguishable from the applied patents.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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